Partners Mend Site, Sew Quilt of Future Uses

Historical photo of the Avtex Fibers plant in full operation.

Avtex Fibers

Located in the picturesque foothills of the Blue Ridge Mountains, the Avtex Fibers Superfund site in Front Royal, VA, is in the midst of being transformed from one of Virginia's largest contaminated sites into a valuable community resource. Community members, a former site owner, the Environmental Protection Agency (EPA), and various other government agencies are working hand-in-hand to clean up and redevelop the area for multiple uses.

The Avtex Fibers plant was at one time the world's largest producer of rayon—an instrumental product for NASA's space shuttle program and for parachutes and jump suits made for the Department of War during World War II. While the plant enjoyed a proud history producing important commodities for the nation and employing thousands of local citizens, it also left behind a legacy of contamination and blighted property on the banks of the Shenandoah River. Since its closing in 1989, community, business, and government partners have worked tirelessly to reverse the damage and redevelop the site for future generations to enjoy.

Avtex Fibers Site

For more than 45 years, the 440-acre Avtex Fibers plant manufactured rayon, polyester, and polypropylene fibers for commercial, defense, and space industries. It employed over 2,500 people in the area. From 1940 through 1962, American Viscose owned the facility and FMC Corporation (FMC) owned the plant from 1963 until 1976. In 1976, Avtex Fibers, Inc. purchased the site from FMC and continued manufacturing operations until 1989, when Avtex closed the plant and declared bankruptcy. In June 1986, the site was listed on the Superfund program's National Priorities List.

The contamination discovered at the Avtex Fibers site was of such magnitude and complexity that the area has been the subject of a number of removal, enforcement, and long-term cleanup actions. Tons of rayon manufacturing wastes and by-products, zinc hydroxide sludge, and fly ash and boiler room solids were disposed of on site in 23 impoundments and fill areas encompassing 220 acres. Waste disposal practices at the plant contaminated the groundwater under the site and in residential wells across the river from the site. The principle contaminants found in the groundwater were carbon disulfide, ammonia, arsenic, antimony, phenol and high pH. Arsenic, lead, and PCBs have been found in soils. PCBs associated with the plant were detected in the Shenandoah River. When the plant closed in 1989, the community was left to contend with severely contaminated land and water, the devastation of its manufacturing heritage, and the loss of approximately 1,000 jobs.

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JUST THE FACTS:

- More than 200,000 tons of waste material and contaminated soils have been removed from the site and 25 acres of former manufacturing buildings have been demolished.
- The total cost of Superfund cleanup, demolition and restoration, including FMC's contribution, is projected to be $150 million.
- To date, Federal and state grants totaling $14 million have been awarded to the project for asbestos abatement and building demolition beyond the scope of Superfund cleanup.

"The settlement between EPA and FMC was the turning point for this project. With the legal issues behind us, we've been able to work cooperatively. Working together we can produce the right results—everybody wins,"

Bonnie Gross, Remedial Project Manager, EPA Region 3.

Responsible Party Steps Up To the Plate - Cleaning Up Avtex

The cleanup history of the Avtex Fibers site illustrates EPA's effective actions to reverse and avert further harm to the environment and human health. Through the extraordinary involvement on the part of FMC, a responsible party that operated the plant from 1963 until 1976, the remaining site cleanup and redevelopment are possible.

From 1989-1998, EPA conducted a series of emergency and on-going removal response activities to address various threats to human health and the environment as the plant continued to degrade. Among EPA's cleanup activities, it transferred tons of chemicals for recycle/reuse, treated thousands of gallons of chemicals, and designed and operated a low-flow wastewater treatment system to protect the Shenandoah River from untreated discharges. A long-term cleanup remedy was selected in 1990 under which nearly 3,000 drums of waste were safely disposed of off-site, and approximately 7,700 tons of PCB contaminated soil and debris were excavated and disposed of in an approved off-site landfill. In addition, EPA completed the dismantling and demolition of the acid reclaim portion of the facility, disposing of nearly 900 tons of hazardous and non-hazardous chemical waste. Based on EPA's August 1996 building evaluation, time-critical removal activities to manage chemical and physical hazards associated with 25 acres of buildings were undertaken, including demolition of more than 740,000 square feet of building space.

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Stephen Heavener, Executive Director of EDA

In July 1999, under a settlement agreement with EPA and the U.S. Department of Justice, FMC agreed to take over the reins of the Avtex Fibers cleanup project. FMC—which had already spent an estimated $20 million on cleanup activities—assumed responsibility for the remainder of site cleanup at a cost of approximately $63 million and reimbursed EPA $9.1 million for its past costs associated with the property. Under the oversight of EPA and the Virginia Department of Environmental Quality (DEQ), FMC agreed to clean up the 440-acre site consistent with redevelopment plans created by local authorities. As part of the cleanup plan, FMC is decontaminating the remaining buildings; disposing of waste materials; removing above-ground and underground tanks; treating waste water; controlling erosion and storm water on the site; and cleaning up some 220 acres of waste lagoons, basins and waste disposal units. In addition, FMC will soon address the plume of groundwater contamination that has resulted from former waste disposal practices. "The settlement between EPA and FMC was the turning point for this project. With the legal issues behind us, we've been able to work cooperatively. Working together we can produce the right results—everybody wins," said Bonnie Gross, Remedial Project Manager for the site.

Cleanup underway at the Avtex site with workers removing hazardous sludge.

As FMC and EPA work diligently on cleanup, the U.S. Army Corps of Engineers (USACE) is on site conducting asbestos abatement and building demolition. Site redevelopment of the former manufacturing plant area will start once the Superfund cleanup and USACE demolition efforts are completed.

Community Participates In Future Site Uses

To ensure that the site is cleaned up and redeveloped in a manner consistent with local needs, EPA, DEQ, the Front Royal-Warren County Economic Development Authority (EDA), and FMC sponsored a multi-stakeholders group (MSG) to facilitate public participation and input. The MSG provides an interactive forum where a broad group of interested parties can consider site-related issues critical to the future of the area. MSG members include local officials, community members, environmental and business group representatives, and municipal planners.

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A Vision for the Future

Exciting and innovative plans are underway to redevelop the Avtex Fibers site. The site is one of ten original pilot sites selected to participate in EPA's Superfund Redevelopment Initiative (SRI). SRI seeks to return Superfund sites to productive use by coordinating environmental cleanups with the planned reuse of the sites. Multiple stakeholders have been actively engaged in developing the reuse plan and in contributing resources. According to Stephen Heavener, Executive Director of EDA (current owner of entire site), "A vision for the future of the Avtex Fibers site was conceived by a broad base of stakeholders and championed by local elected officials. As evidenced by the inordinate success in harnessing a diverse array of human and capital resources, the project is truly a national demonstration on inter-governmental and private sector cooperation."

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Visit the EPA Region web site at:
http://www.epa.gov/region3/Superfund

Through the MSG, participants developed a redevelopment plan that divides the site into three areas: a 240-acre river conservancy park along the riverfront, a 25-acre active recreation park, and a 165-acre eco-business park. With regards to the conservancy park, the redevelopment plan recommends restoring the former waste basin area into a park that combines ecological restoration and conservation of native habitats with recreation opportunities for local residents and visitors. The plan designates a series of naturalized habitat areas throughout the basin area that represent the region's ecosystems. These habitats will encourage wildlife diversity and provide opportunities for environmental education. Interpretation of the complete history of the site from prehistoric times up to the present, including the story of pollution and on-site clean up, as well as the site's restored ecology, will be structured around a series of themed trails. The plan also envisions enjoyment of the Shenandoah River by providing boat landings, picnic shelters, recreational facilities, and open areas. The first phase of the park will be open to the public in late summer of 2003. Recently, town and county government officials and A.S. Rhodes Elementary second graders gathered to help plant trees for the park. More than 4,300 trees have been planted on the first 13 acres of restored land. "This is the end of remediation and the beginning of building a conservancy park," said FMC Site Manager Doug Bement. "I know many of you wondered when this day was gonna come. We have done it - this is a remediated site." (Planting a Legacy, Northern Virginia Daily, April 13, 2002)

The EDA is taking the lead on planning the eco-business park. The centerpiece of the park will be the refurbished historic former Avtex administration building, which will set a high environmental standard for the entire park. Various sustainable and renewable strategies are being implemented in the rehabilitation project, such as the use of natural lighting, low VOC paints and finishes, xeriscaping, and other techniques. The green approach is designed to improve the indoor environmental quality for the building's employees, reduce life cycle and operation/maintenance costs, and reduce the environmental impact of materials production. The planned office buildings in the park will be developed to meet the Leadership in Energy and Environmental Design standards of the U.S. Green Building Council.

E. Wilson Morrison Elementary School children planting trees for the Conservancy Park, April 8, 2002.